

ABSTRACT

The present invention relates to an integrated engine for beach cruisers comprising a speed variator, a rear gear box component, a shaft, a left crankcase component and a left crankcase cap component; the rear gear box component, the left crankcase component and the left crankcase cap component are connected to form a closed housing structure; the present invention also comprises an engine, a differential and a gear shift device; the engine is directly connected with the speed variator; the differential is disposed between the speed variator and the shaft; the speed variator comprises an automatic indefinite speed variator mechanism and a gear double reduction mechanism; the gear shift device is disposed in the gear double reduction mechanism; the differential can be manually operated so as to actuate or cancel the differential function. The present invention of the above structure allows users to opt for the reverse gear and differential function. It also has the advantages of low noise, high efficiency, easy maintenance and small size and is suitable for application in beach cruisers.